



## SEQUENCE LISTING

<110> THE REGENTS OF THE UNIVERSITY OF CALIFORNIA  
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PRAKKEN, Berent J.

<120> STRESS PROTEINS AND PEPTIDES AND METHODS OF USE THEREOF

<130> UCSD1310-1

<140> US 09/828,574

<141> 2001-04-06

<150> US 60/224,104

<151> 2000-08-09

<160> 23

<170> PatentIn version 3.1

<210> 1

<211> 573

<212> PRT

<213> Homo sapiens

<400> 1

Met Leu Arg Leu Pro Thr Val Phe Arg Gln Met Arg Pro Val Ser Arg  
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Val Leu Ala Pro His Leu Thr Arg Ala Tyr Ala Lys Asp Val Lys Phe  
20 25 30

Gly Ala Asp Ala Arg Ala Leu Met Leu Gln Gly Val Asp Leu Leu Ala  
35 40 45

Asp Ala Val Ala Val Thr Met Gly Pro Lys Gly Arg Thr Val Ile Ile  
50 55 60

Glu Gln Ser Trp Gly Ser Pro Lys Val Thr Lys Asp Gly Val Thr Val  
65 70 75 80

Ala Lys Ser Ile Asp Leu Lys Asp Lys Tyr Lys Asn Ile Gly Ala Lys  
85 90 95

Leu Val Gln Asp Val Ala Asn Asn Thr Asn Glu Glu Ala Gly Asp Gly  
100 105 110

Thr Thr Thr Ala Thr Val Leu Ala Arg Ser Ile Ala Lys Glu Gly Phe  
115 120 125

Glu Lys Ile Ser Lys Gly Ala Asn Pro Val Glu Ile Arg Arg Gly Val  
130 135 140

Met Leu Ala Val Asp Ala Val Ile Ala Glu Leu Lys Lys Gln Ser Lys  
145 150 155 160

Pro Val Thr Thr Pro Glu Glu Ile Ala Gln Val Ala Thr Ile Ser Ala  
165 170 175

Asn Gly Asp Lys Glu Ile Gly Asn Ile Ile Ser Asp Ala Met Lys Lys  
180 185 190

Val Gly Arg Lys Gly Val Ile Thr Val Lys Asp Gly Lys Thr Leu Asn  
195 200 205

E  
Asp Glu Leu Glu Ile Ile Glu Gly Met Lys Phe Asp Arg Gly Tyr Ile  
210 215 220

Ser Pro Tyr Phe Ile Asn Thr Ser Lys Gly Gln Lys Cys Glu Phe Gln  
225 230 235 240

Asp Ala Tyr Val Leu Leu Ser Glu Lys Lys Ile Ser Ser Ile Gln Ser  
245 250 255

Ile Val Pro Ala Leu Glu Ile Ala Asn Ala His Arg Lys Pro Leu Val  
260 265 270

Ile Ile Ala Glu Asp Val Asp Gly Glu Ala Leu Ser Thr Leu Val Leu  
275 280 285

Asn Arg Leu Lys Val Gly Leu Gln Val Val Ala Val Lys Ala Pro Gly  
290 295 300

Phe Gly Asp Asn Arg Lys Asn Gln Leu Lys Asp Met Ala Ile Ala Thr  
305 310 315 320

Gly Gly Ala Val Phe Gly Glu Gly Leu Thr Leu Asn Leu Glu Asp  
325 330 335

Val Gln Pro His Asp Leu Gly Lys Val Gly Glu Val Ile Val Thr Lys  
340 345 350

Asp Asp Ala Met Leu Leu Lys Gly Lys Gly Asp Lys Ala Gln Ile Glu  
355 360 365

Lys Arg Ile Gln Glu Ile Ile Glu Gln Leu Asp Val Thr Thr Ser Glu  
370 375 380

Tyr Glu Lys Glu Lys Leu Asn Glu Arg Leu Ala Lys Leu Ser Asp Gly  
 385                           390                           395                           400

Val Ala Val Leu Lys Val Gly Gly Thr Ser Asp Val Glu Val Asn Glu  
 405                           410                           415

Lys Lys Asp Arg Val Thr Asp Ala Leu Asn Ala Thr Arg Ala Ala Val  
 420                           425                           430

Glu Glu Gly Ile Val Leu Gly Gly Cys Ala Leu Leu Arg Cys Ile  
 435                           440                           445

  
 Pro Ala Leu Asp Ser Leu Thr Pro Ala Asn Glu Asp Gln Lys Ile Gly  
 450                           455                           460

Ile Glu Ile Ile Lys Arg Thr Leu Lys Ile Pro Ala Met Thr Ile Ala  
 465                           470                           480

Lys Asn Ala Gly Val Glu Gly Ser Leu Ile Val Glu Lys Ile Met Gln  
 485                           490                           495

Ser Ser Ser Glu Val Gly Tyr Asp Ala Met Ala Gly Asp Phe Val Asn  
 500                           505                           510

Met Val Glu Lys Gly Ile Ile Asp Pro Thr Lys Val Val Arg Thr Ala  
 515                           520                           525

Leu Leu Asp Ala Ala Gly Val Ala Ser Leu Leu Thr Thr Ala Glu Val  
 530                           535                           540

Val Val Thr Glu Ile Pro Lys Glu Glu Lys Asp Pro Gly Met Gly Ala  
 545                           550                           555                           560

Met Gly Gly Met Gly Gly Met Gly Gly Met Phe  
 565                           570

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Gly Glu Ala Leu Ser Thr Leu Val Val Asn Lys Ile Arg Gly Thr  
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<213> Homo sapiens

<400> 3

Gly Glu Ala Leu Ser Thr Leu Val Leu Asn Arg Leu Lys Val Gly  
1 5 10 15

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<212> PRT  
<213> Mycobacterium

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Pro Tyr Ile Leu Leu Val Ser Ser Lys Val Ser Thr Val Lys Asp  
1 5 10 15

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<211> 15  
<212> PRT  
<213> Homo sapiens

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Ala Tyr Val Leu Leu Ser Glu Lys Lys Ile Ser Ser Ile Gln Ser  
1 5 10 15

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<213> Mycobacterium

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Glu Ala Val Leu Glu Asp Pro Tyr Ile Leu Leu Val Ser Ser Lys  
1 5 10 15

<210> 7  
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<213> Homo sapiens

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Lys Cys Glu Phe Gln Asp Ala Tyr Val Leu Leu Ser Glu Lys Lys  
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<210> 8  
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<213> Mycobacterium

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Ile Ala Gly Leu Phe Leu Thr Thr Glu Ala Val Val Ala Asp Lys  
1 5 10 15

<210> 9  
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<212> PRT  
<213> Homo sapiens

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Val Ala Ser Leu Leu Thr Thr Ala Glu Val Val Val Thr Glu Ile  
1 5 10 15

  
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<213> Artificial sequence

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Gln Lys Arg Ala Ala Tyr Asp Gln Tyr Gly His Ala Ala Phe Glu  
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<212> PRT  
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Asp Glu Arg Ala Ala Tyr Asp Gln Tyr Gly His Ala Ala Phe Glu  
1 5 10 15

<210> 12  
<211> 11  
<212> PRT  
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<220>  
<223> pan-DR binder peptide

<220>  
<221> MISC\_FEATURE  
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<223> Xaa is any amino acid

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Lys Xaa Val Ala Ala Trp Thr Leu Lys Ala Ala  
1 5 10

<210> 13  
<211> 573  
<212> PRT  
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<400> 13

Met Leu Arg Leu Pro Thr Val Phe Arg Gln Met Arg Pro Val Ser Arg  
1 5 10 15

Val Leu Ala Pro His Leu Thr Arg Ala Tyr Ala Lys Asp Val Lys Phe  
20 25 30

Gly Ala Asp Ala Arg Ala Leu Met Leu Gln Gly Val Asp Leu Leu Ala  
35 40 45

Asp Ala Val Ala Val Thr Met Glu Pro Lys Gly Arg Thr Val Ile Ile  
50 55 60

Glu Gln Ser Trp Gly Ser Pro Asn Val Thr Lys Asp Gly Val Thr Val  
65 70 75 80

Ala Lys Ser Ile Asp Leu Lys Asp Lys Tyr Lys Asn Ile Gly Ala Lys  
85 90 95

Leu Val Gln Asp Val Ala Asn Asn Thr Asn Glu Glu Ser Gly Asp Gly  
100 105 110

Thr Thr Thr Ala Thr Val Leu Ala Gly Ser Ile Ala Lys Glu Gly Phe  
115 120 125

Gln Lys Ile Ser Lys Gly Ala Asn Pro Val Glu Ile Arg Arg Gly Val  
130 135 140

Met Leu Ala Val Asp Ala Val Ile Ala Glu Leu Lys Lys Gln Ser Lys  
145 150 155 160

Pro Val Thr Thr Pro Glu Glu Ile Ala Gln Val Ala Met Ile Ser Ala  
165 170 175

Asn Gly Asp Lys Glu Ile Gly Asn Ile Ile Ser Asp Ala Met Lys Lys  
180 185 190

Val Gly Arg Lys Gly Val Ile Thr Val Lys Asp Gly Lys Thr Leu Asn  
195 200 205

Asp Glu Leu Glu Ile Ile Glu Gly Met Lys Phe Asp Arg Gly Tyr Ile  
 210 215 220

Ser Pro Tyr Phe Ile Asn Thr Ser Lys Gly Gln Lys Cys Glu Phe Gln  
 225 230 235 240

Asp Ala Tyr Val Leu Leu Ser Glu Lys Lys Ile Ser Ser Val Gln Ser  
 245 250 255

Ile Val Pro Ala Leu Glu Ile Ala Asn Ala His His Lys Pro Leu Val  
 260 265 270

  
 Ile Ile Ala Glu Asp Val Asp Gly Glu Ala Leu Ser Thr Leu Ile Leu  
 275 280 285

Asn Arg Leu Lys Val Gly Leu Gln Val Val Ala Val Lys Ala Pro Gly  
 290 295 300

Phe Gly Asp Asn Arg Lys Asn Gln Leu Lys Asp Met Ala Ile Ala Thr  
 305 310 315 320

Gly Gly Ala Val Phe Gly Glu Gly Leu Thr Leu Asn Leu Glu Asp  
 325 330 335

Val Gln Pro His Asp Leu Gly Lys Val Gly Glu Val Ile Val Thr Lys  
 340 345 350

Asp Asp Ala Met Leu Leu Lys Gly Lys Gly Asp Lys Ala Gln Leu Glu  
 355 360 365

Lys Arg Ile Gln Glu Ile Ile Gly Gln Leu Asp Val Thr Thr Ser Glu  
 370 375 380

Tyr Glu Lys Glu Lys Leu Asn Glu Trp Leu Ala Lys Leu Ser Asp Gly  
 385 390 395 400

Val Val Val Leu Lys Phe Gly Gly Thr Ser Asp Val Glu Val Asn Glu  
 405 410 415

Lys Lys Asp Arg Val Thr Asp Ala Leu Asn Ala Thr Arg Ala Ala Val  
 420 425 430

Glu Gly Gly Ile Val Leu Gly Gly Phe Ala Leu Leu Arg Cys Ile  
 435 440 445

Pro Ala Leu Asp Ser Leu Thr Pro Ala Asn Glu Asp Gln Lys Ile Gly

450

455

460

Met Glu Ile Val Lys Arg Thr Leu Lys Ile Pro Ala Met Thr Thr Ala  
 465                          470                          475                          480

Thr Asn Ala Gly Val Glu Gly Ser Leu Ile Val Glu Lys Ile Met Gln  
 485                          490                          495

Asn Ser Ser Glu Val Gly Tyr Asp Ala Met Val Gly Asp Phe Met Asn  
 500                          505                          510

  
 Met Val Glu Lys Gly Ile Ile Asp Pro Thr Lys Leu Val Arg Thr Ala  
 515                          520                          525

Leu Leu Asp Ala Ala Gly Val Ala Ser Leu Leu Thr Thr Ala Glu Val  
 530                          535                          540

Val Val Thr Glu Ile Pro Lys Glu Glu Lys Asp Pro Gly Met Gly Ala  
 545                          550                          555                          560

Met Gly Gly Met Gly Gly Met Gly Gly Met Phe  
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<212> PRT  
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<400> 14

Leu Ser Thr Leu Val Val Asn Lys Ile  
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<210> 15  
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<212> PRT  
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Leu Ser Thr Leu Val Leu Asn Arg Leu  
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<210> 16  
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Leu Val Ser Ser Lys Val Ser Thr Val

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5

<210> 17  
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<212> PRT  
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<400> 17

Tyr Ile Leu Leu Val Ser Ser Lys Val  
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E  
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Leu Ser Glu Lys Lys Ile Ser Ser Ile  
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<400> 19

Leu Glu Asp Pro Tyr Ile Leu Leu Val  
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<210> 20  
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<212> PRT  
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Phe Gln Asp Ala Tyr Val Leu Leu Ser  
1 5

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<212> PRT  
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<400> 21

Leu Thr Thr Glu Ala Val Val Ala Asp  
1 5

<210> 22  
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<400> 22

Phe Leu Thr Thr Glu Ala Val Val Ala  
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<211> 9

<212> PRT

<213> Homo sapiens

<400> 23

E Leu Thr Thr Ala Glu Val Val Val Thr  
1 5